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Oral Health Status and Treatment Needs of Transgender in Pune City, Maharashtra, India: A Pilot Survey

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ABSTRACT

Aim: To assess the oral health status and treatment needs of transgender people residing in Pune city, Maharashtra, India.

Materials & Methods: Transgenders for the pilot survey were selected who were present on the day of examination using the snowballing technique to assess the periodontal status, dentition status, prosthetic status, and needs in Pune city. 49 subjects were recruited for the examination who were willing to participate. The World Health Organization (WHO) oral health assessment form 1997 was modified to record the findings. Data were analyzed in terms of descriptive statistics using numbers, percentages, and mean values.

Results: The majority of the eunuchs (57.1%) were having the habit of chewing smokeless tobacco-containing betel nut, quid, gutka, and lime whereas only 30.6% abstained from tobacco. Calculus was seen in 91.83% of the eunuchs and 89.7% were having or have had caries of the permanent dentition, 87.7% were with untreated caries and 55.1% were showing four or more Decayed Missing Filled Teeth. (DMFT) 40 subjects required one surface filling and 16 required pulp care.

Conclusion: Poor oral health awareness and pernicious tobacco habits have influenced the oral health status and treatment needs of transgender people. Unmet dental treatment needs, which mainly included scaling, extraction, restoration, and prosthetic rehabilitation.

Key Words: Transgender, Eunuchs, Oral Health Status, Hijras

INTRODUCTION

The term EUNUCH is derived from a Greek word meaning "Keeper of the bed". [1-3] In India, eunuchs are also called '*Hijra*', which refers to the third gender or transgender.[1] Telegraphic report shows that India has an estimated 1.5 million eunuchs[4] but, the census data on them does not exist, so it is impossible to make an accurate enumeration as they continue to persist as a marginalized and secretive community.[1]Their sources of livelihood mainly include performing at marriages and birth celebrations, *badhai* (ritual performing) *Basti/mangti* (begging) for alms, and prostitution. [3]

In India, there are few studies [4,5]that have been done to assess risk behaviours including the number and type of sex partners, condom use, knowledge of sexually transmitted infection, HIV/AIDS, and drug/substance use among hijras. In transgender people, a high prevalence of oral diseases is expected commonly because of the stigma associated with their gender, because of their secretive lifestyle, and their fear of approaching the doctor. Oral wellbeing has a huge impact on one's quality of life. Poor oral health, such as dental caries, periodontal disease, and tooth loss, may have a negative impact on food intake and nutritional status, putting one's health at risk.[1] Similarly, systemic diseases and/or the adverse side effects of their treatments can lead to an increased risk of oral diseases. The main reason for periodontal disease is the presence of microorganisms in dental plaque which can prove to be hazardous for periodontal tissue.[1] Another main aspect of oral health disease is the loss of the tooth. Lack of health education, awareness and infrastructure, poor oral hygiene practices, tobacco use, and insufficient oral

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healthcare facilities are the major reasons behind poor oral health leading to tooth loss. [6] One of the most common oral health diseases is dental caries. Dental caries is a preventable disease that is recognized as the primary cause of oral pain and tooth loss. This combination may accentuate the impact of oral status on well-being. It is our social responsibility to provide this segment of society with high-quality health care. [7]

The data available on the oral health status of this vulnerable population is scarce. Hence the present study was being designed to assess the oral health status and treatment needs of the transgender population residing in Pune city, Maharashtra, India following the guidelines of basic oral health survey World Health Organization (WHO)1997 proforma.

MATERIALS AND METHODS

A pilot survey was conducted to assess the oral health status and treatment needs amongst transgender residing in Pune city, Maharashtra, India. Scientific clearance was obtained from the ethical committee and written informed content was taken before the oral examination. Based on the snowball sampling technique, 49 self-identified eunuchs residing in the city of Pune who were present at the time of examination and who fulfilled the selection criteria were examined. Transgender people who were willing to participate were included and those who belonged to the Lesbian, Gay, Bisexual and Queer communities were excluded. Information on demographic characteristics such as age, literacy level, occupation, oral health practices, and tobacco habits was collected.

Clinical examination

The oral health evaluation proforma of the World Health Organization (WHO)1997[8] was updated to collect information on oral health status and treatment needs. The principal investigator conducted the clinical examination as part of the survey. To reduce error, the investigator read, understood, and standardized his method of action. During the sample, ten subjects were examined twice, and the reproducibility for dentition status, periodontal status, and treatment need was 95%. Throughout the survey, a recording clerk was trained to assist in the recording process. The clinical examination was done in the field setting and the subjects sat comfortably. Clinical examination was done under natural light using a mouth mirror and CPI probe.

Statistical Analysis

The data was analyzed using Statistical Package for Social Sciences (SPSS) for Windows 26.0 (SPSS, Inc. Chicago, Illinois). Descriptive statistics were used in the form of numbers, percentages, and mean values.

RESULTS

Table 1 shows the distribution of demographic details. A total of 49 subjects were distributed into 4 age groups. The majority of the subjects (32.6) had completed secondary and higher secondary school while only 10.2% completed graduation. 69.5% of the subjects were unemployed and they earned their livelihood through begging. Table 2 is assessing oral health habits. 93.8% of the subjects used toothbrushes and toothpaste for maintaining oral hygiene. The majority of the eunuchs (57.1%) were having the habit of chewing smokeless tobacco-containing betel nut, quid, gutka, and lime whereas only 30.6% abstained from tobacco. Table 3 shows that calculus was seen in 91.83% of the eunuchs. Table 4 shows caries prevalence and treatment needs. 89.7% were having or have had caries of the permanent dentition, 87.7% were with untreated caries and 55.1% were showing four or more Decayed, Missing, and Filled Permanent Teeth. The mean number of decayed permanent teeth per person was 3.97, filled permanent teeth with decay was 0.04, missing permanent teeth due to caries was 0.59, and the mean DMFT per person was 4.89. 40 subjects required one surface filling and 16 required pulp care.

DISCUSSION

It is noteworthy about the hijras that their role is so deeply rooted in Indian culture that it can accommodate a wide variety of gender identities, cross-gender behaviours, and levels of commitment without losing their cultural meaning.[9] Despite having general or oral health problems, the hijras would rather bear the pain than visit a doctor owing to the stigma around them of not being treated well.[9] Snowball sampling was difficult because standard probability sampling methods produced low response rates and responses that lack honesty. [10,11]

In the present study, out of 49 subjects, 10.2% were smokers and 57.1% used smokeless. In the study done by Hongal et al.[13] and Torwane et al., [1,10] 54.6% of eunuchs were having the habit of chewing smokeless tobacco, 35.7% had the habit of using both smoking and smokeless tobacco. Total tobacco usage among eunuchs was found to be 90.3%. Hongal et al. 2014 [13] highlighted that 24.2% were betel nut and betel quid users. However, in the study by Saravanan et al. [12] 35.0% were gutkha users, 29.9% were tobacco users, 6.6 % were smokers and 5.8% were panned users. Torwane et al.[10] showed that 24.2% were betel nut and betel quid users and 42.5% were tobacco users. In Chennai, Bhopal, or Pune, the usage of smokeless tobacco is in the range of 30% - 54.6 % among eunuchs.

In the study by Saravanan et al. [12] 47.4% was the highest per cent of the study population having calculus and Tor-

wane et al. [10] showed 43% of the study population having calculus which is in close accordance with the current study. These findings are although most of the subjects were using toothbrushes and toothpaste. Unmet treatment needs since they do not visit the dentist regularly could be the cause of poor oral hygiene. Saravanan et al.[12] showed that 69.3% had decayed teeth, 23.4% had missing teeth and 5.1% had filled teeth which is similar to our study. The reason for high caries prevalence could be due to dietary habits playing a significant role including unmet treatment needs of chronic disease. 50.4% needed extraction, 13.9% needed filling, and 5.1% needed root canal treatment in the studies done by Hongal et al. [2] and Saravanan et al. [12] which is similar to our study where the demand for treatment was high.

This study should serve as the basis for a larger, nationwide survey of oral health among socially deprived communities like eunuchs. To overcome social barriers, the medical and dental practitioners combined, are needed to show responsibility and take a step forward and approach such communities. However, the results of the present study can hardly be used extensively due to the small sample size and the snowball sampling technique. Regular dental check-ups and awareness programs, as well as delivery of dental services, should be provided through the established health centres for their population.

CONCLUSION

The current findings of the study indicate that the oral health status of transgender was relatively poor with almost 91.83% of subjects having calculus. 89.7 % of subjects had caries experience, 87.7% had untreated caries and 55.1% had four or more DMFT. Lower awareness levels, pernicious tobacco habits seemed to influence the oral health status of the transgender people of Pune city, Maharashtra, India. Extensive unmet dental treatment needs, which mainly included scaling, extraction, and restoration of teeth were required. In light of the observations from the present study, transgenders should be made aware of the need and access to oral health care should be stepped up and adequate preventive measures should be taken.

Conflict of Interest: None

Source of Funding: None

Author's Contribution

AK,SHS and PK conceived the research idea. AK collected the data and SHS supervised the findings of the work. VM performed data analysis. AK and VM drafted the article. SHS and PK critically reviewed the article. All authors discussed the results and contributed to the final manuscript.

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Table 1: Distribution of Demographic Details

Age (In Years)	Number (n)	Percentage (%)
18-28 years	28	57.5
29-38Years	14	28.5
39-48 Years	5	10
49-58 Years	2	4
Literacy Level		
Primary school completed	11	22.4
Secondary school completed	16	32.6
Higher Secondary school completed	16	32.6
College/University	5	10.2
Postgraduate degree	1	2.2
Occupation		
Begging	34	69.5
Dancer	9	18.3
Priest	3	6.1
Other	3	6.1

Table 2: Distribution of Oral Health-related Habits

Oral health practices	Number (n)	Percentage (%)
Toothbrush and Toothpaste	46	93.8
Herbal stick	0	0
Finger	2	4
Others	1	2.2
Use of Tobacco		
Smoking	5	10.2
Smokeless	28	57.1
Both	1	2.
None	15	30.6

Table 3: Distribution of Periodontal Status and Loss of Attachment

Periodontal Status	Healthy	Bleeding	Calculus	Shallow pocket	Deep pocket
	0	6.12	91.83	2.04	0
Loss of Attachment					
	0-3mm	**4-5mm**	**6-8mm**	**9-11mm**	**>12mm**
	93.8	6.12	0	0	0

Table 4: Distribution of Caries and Treatment Needs

	Subjects who have or have had caries of the permanent dentition	Subject with untreated caries	Subject with four or more DMF permanent teeth		
Percentage	89.7	87.7	55.1		
	Decayed	**Filled, with decay**	**Filled**	**Missing, as a result of caries**	**DMFT**
Mean Values	3.97	0.04	0.28	0.59	4.89
	Preventive, caries and Fissure sealant	**One surface filling**	**Two or more surface fillings**	**Crown and Veneer/ Laminate**	**Pulp care/ Restoration and Extraction**
Number	0	30	0	3	16

DMFT – Decayed, Missing, Filled and Treated